are so well known in this industry that it will not be necessary to devote much space to them.

Fig. 84 shows the same kiln (Fig. 83) *reconstructed* to work on the downdraft principle. The distribution of the current's of hot gases is very good, as the hottest gases rise to the arch of the furnace and then divide themselves into uniformly descending currents. One of the results of this reconstruction was the reduction of the amount of defective brick turned out from 30 per cent to 1 per cent.

Fig. 85 shows a two-story kiln used in the manufacture of

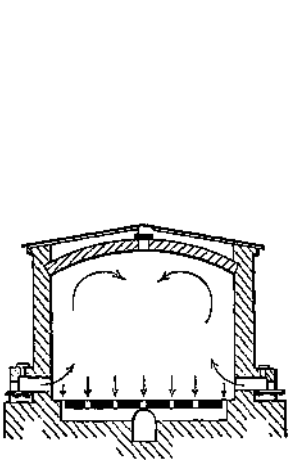

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FIG. 84.

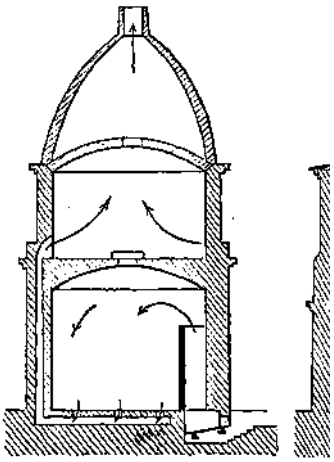

FIG. 85.

FIG. 86.

porcelain. Such kilns are still actually in use. The upper chamber works in an unsatisfactory manner, the hot gases being divided into ascending currents; it is practically impossible to regulate the distribution of the heat by changing the size of the waste-gas opening. The lower chamber of the kiln, which works on the downdraft principle, has a regular heat distribution.

Fig. 86 shows a kiln of this type correctly constructed, both the upper and the lower chamber working upon the downdraft principle. The firebox has been changed from the lower to the upper chamber.

Note ly English translator:—Downdraft "beehive" kilns are widely used in the manufacture of refractory brick. In the silica brick plants it is well known that only one-seventh of the kiln capacity can be used for coke oven shapes, many of which require two burns. The prevailing tendency in